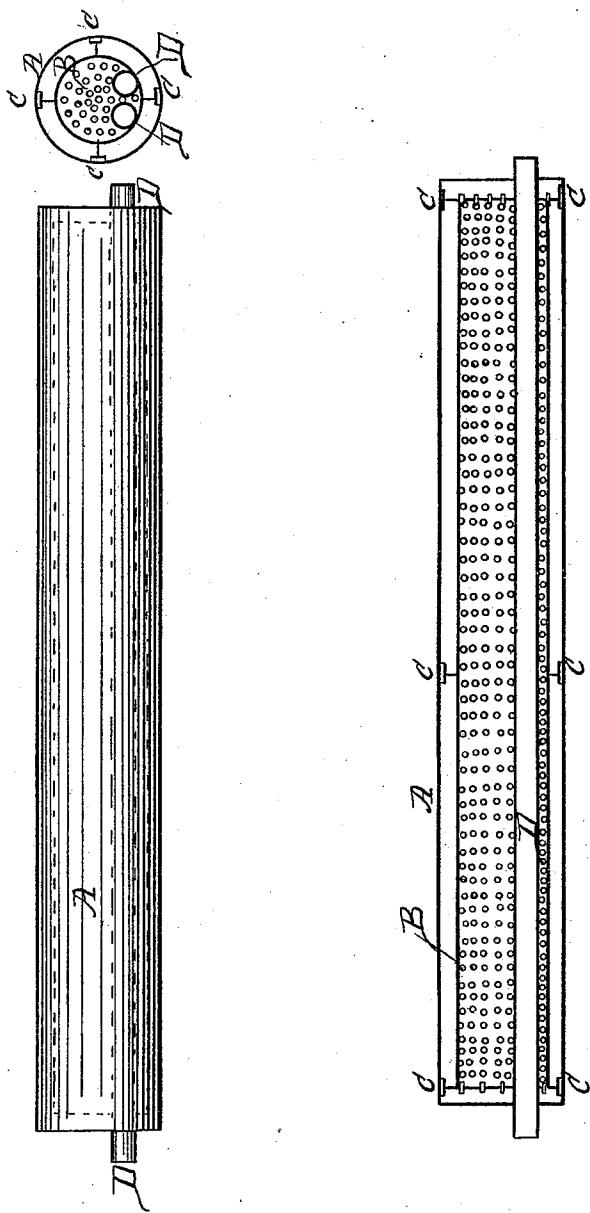


A. Eitelgeorge,  
Steam Safety Valve.  
No 200. Patented May 22, 1837.



# UNITED STATES PATENT OFFICE.

AUGUSTUS EITELGEORGE, OF CINCINNATI, OHIO.

## MODE OF PREVENTING STEAM-BOILERS FROM BURSTING AND APPLICABLE TO OTHER PURPOSES.

Specification of Letters Patent No. 200, dated May 23, 1837.

*To all whom it may concern:*

Be it known that I, AUGUSTUS EITELGEORGE, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have 5 invented a new and useful Mode of Constructing Steam-Boilers to Prevent Bursting, called the "Steam-Regulator," which is described as follows, reference being had to the annexed drawings of the same, making

10 part of this specification.

The nature of my invention consists in providing the common steam boiler with a hollow cylindrically shaped regulator or guard of a lesser diameter than the boiler 15 placed within the same, leaving a space of several inches between its outer surface and the inner surface of the boiler, having its sides and ends pierced with apertures of proper size, shape, number and distance 20 apart; the regulator being secured to the boiler by arms, bars or braces extending from the outside of the inner cylinder or regulator to the inside of the boiler, the flues passing through the boiler as well as through 25 the regulator; the use of said regulator being to break or check or equalize the power of the steam on the inner surface of the boiler, and by this means prevent its acting with great force on any one point.

30 To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my steam boiler A in any of the known forms and apply thereto gauge 35 cocks, a safety valve and other appendages of such boilers; but in order to obviate the danger arising from the sudden and unequal pressure of a large body of steam on the inside of the boiler at any point, I make a second hollow cylinder B of lesser diameter 40 than the outer one or boiler having its sides and ends pierced with apertures of a suitable size, number and position, which cylinder or steam regulator, as I term it, I place 45 within the boiler and secure the same by rods, braces or arms, *c c c c*, extending from the sides and ends of the regulator to the sides and ends of the boiler and I cause the

flues D D to pass through the regulator as well as through the boiler for heating the 50 same, said additional cylinder or steam regulator being for the purpose of breaking or equalizing the pressure of the steam against the sides of this boiler and thus preventing its bursting. The size and proportion of 55 the regulator and the apertures therein may be varied to suit circumstances.

The regulator and boiler may be cleaned by providing doors in the end of the same, if necessary. It may be used in vessels for 60 containing compressed air. This regulator may also be applied to steam pipes, particularly to straight ones.

*Proportion of a boiler and regulator.*—If the boiler is 25 feet in length and 3 feet 4 65 inches diameter inside the regulator must be 24 feet 2 inches in length and 2 feet 6 inches diameter, outside, and the space between the two must be about 5 inches; these dimensions, however, may be varied to suit cir- 70 cumstances.

What I claim as my invention and desire to secure by Letters Patent is—

The application to common steam boilers of a perforated steam regulator of a corresponding figure to that of the boiler in which it is placed, but of smaller dimensions, leaving a space between it and the sides and ends of the boiler, secured by rods or arms extending from the sides and ends 75 of the regulator to the sides and ends of the boiler, the flues passing through both regulator and boiler for preventing the bursting of the latter by checking, breaking, or equally distributing the power of the steam, 80 and thus preventing its acting with too great a force on any part of the boiler, whether constructed in the manner herein described, or in any other substantially the same in principle and for the purposes here- 85 90 in set forth.

AUGUSTUS EITELGEORGE.

Witnesses:

Wm. P. ELLIOT,  
JAMES MacGREGOR, Jr.